

**THE CLAIMS****What is Claimed is:**

1. A method of milk separation, comprising separating milk to recover at least one milk product therefrom, by cross-flow membrane filtration, wherein said method does not include any chromatography or precipitation steps.
2. The method of claim 1, wherein the milk product comprises a material selected from the group consisting of fats, lipids, insoluble casein, immunoglobulins, albumin, betalactoglobulin, alpha-lactalbumin, complex carbohydrates, sialyllactose, simple carbohydrates, lactose.
3. The method of claim 1, wherein the cross-flow membrane filtration is carried out in a cross-flow filtration module including a filter with geometrically regular subchannels geometrically corresponding to one another in a flow passage for said filtration, wherein operating conditions and/or said subchannels have been optimized with respect to shear rate and/or permeate diffusion.